

How Price Instability Complicates the Analysis of Price Supports: Discussion

Michele C. Marra

As has been his habit in previous work, Bruce Gardner gives us in this paper a very clear picture of an issue along with a foundation for further analysis. The modeling is clear and simple enough to follow easily and yet rich enough to substantiate his main points, at least in a static framework. I believe that this paper will provide those of us who are interested in policy and risk analysis much food for thought and further work.

The main lesson in this paper, as I see it, is that there can be a supply response to price variability even in the absence of non-neutral risk attitudes. Consequently, we need to be aware of this additional supply shifter as well as the supply shifter demonstrated by Baron and others to be a result of risk aversion when we analyze policy effects on market equilibria as well as when we attempt to assess risk attitudes using market data. This is a point well made and I think it will be a real contribution to the efforts in these areas of analysis.

I would like to encourage Bruce to build on the static foundation laid out in this paper by placing it in a simple dynamic setting. If we look at market response to stabilization over time, I think at least two further complications would emerge.

First, in looking at price support policy over time, we would have to consider the eventual disposition of the commodity stocks held by the stabilization authority. This disposition would have some effect on the price distribution as well. In the simplest case, where stocks are sold out of storage when the market price reaches some target level, there may be some truncation of the upper tail of the producer-perceived distribution as well as truncation of the lower tail through the buying-up of output.

This would have some mitigating effect on the risk-neutral supply shifter that is demonstrated in the static framework.

The second likely effect of the introduction of dynamics into the picture is that stabilization over time, while it lessens the impact of the risk-averse part of the response, may increase the risk-neutral part of the response. For example, consider the present dilemma of some producers of supported commodities. In partial response to less uncertain prices as a result of support programs, there has been a tendency for some farmers to invest in less flexible, more specialized physical and human capital and spend less time investigating possible avenues of risk reduction in the market place. This has left them less able to adjust to the current economic environment in agriculture. This is a cost of stabilization that is often overlooked. Bruce has dealt with this issue in a previous work (Gardner, 1985 a) and I would like to see that discussion included in this paper. In terms of the model, this response to stabilization would increase the magnitude of the error term, e , in the supply equation (eq. 7). Since the risk-neutral supply response is a positive function of e (eq. 11), then it would likely increase with stabilization over time.

Since the above-mentioned effects are somewhat competitive, the bottom-line result in terms of market equilibrium with the addition of a time dimension remains to be seen. Further analysis of these aspects should prove to be interesting.

I would like to conclude by highly recommending this paper to anyone interested in agricultural policy or risk issues. I agree with Bruce when he states that we as a profession were not ready in terms of economic models to deal with these issues as they relate to the 1985 Farm Bill. I urge all of us to use the foundations laid out in this paper to be more prepared when the next farm bill is being considered.

References

Baron, D. P. "Price Uncertainty, Utility, and Industry Equilibrium in Pure Competition." *International Economic Review* 3(1970):463-479.

Gardner, Bruce. "Is It Wrong to Fluctuate?: Policy Uses

of Risk Management Research." Invited paper, S-180 Regional Project annual meeting, Charleston, SC, March, 1985 (a).

Gardner, Bruce. "How Price Instability Complicates the Analysis of Price Supports." Invited paper, NAREA annual meeting, Amherst, MA, June, 1985 (b).